

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

(12) UK Patent Application (19) GB (11) 2 211 095 (13) A

(43) Date of A publication 28.06.1989

(21) Application No 8724396.0

(22) Date of filing 19.10.1987

(71) Applicant  
Anthony D Haeri  
29 Connaught Gardens, London, N10 3LD,  
United Kingdom

(72) Inventor  
Anthony D Haeri

(74) Agent and/or Address for Service  
Beresford & Co  
2-5 Warwick Court, High Holborn, London, WC1R 5DJ,  
United Kingdom

(51) INT CL.  
A61F 5/47

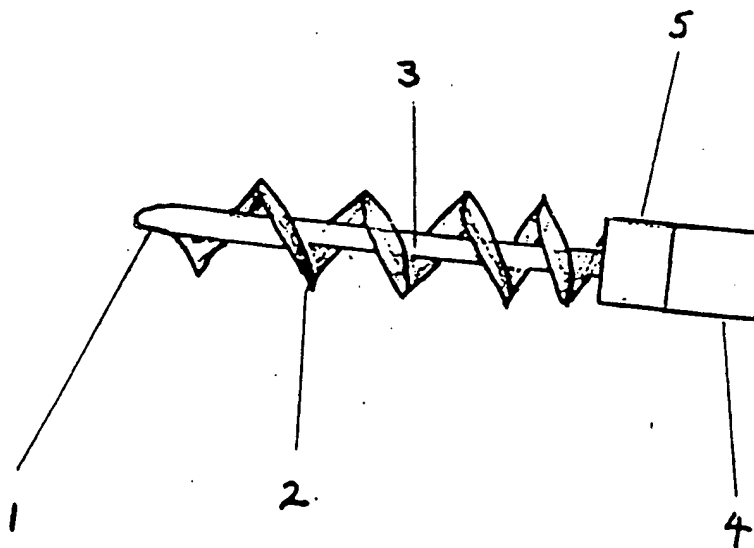
(52) UK CL (Edition J)  
A5R RAM REU  
F2P PTP P23E

(56) Documents cited  
Dana C Mears, "Materials and Orthopaedic Surgery",  
1979, Williams and Wilkins, Figure 9-8 page 285

(58) Field of search  
UK CL (Edition J) A5R RAM REU REY  
INT CL. A61F

(54) Uterine screw-plug

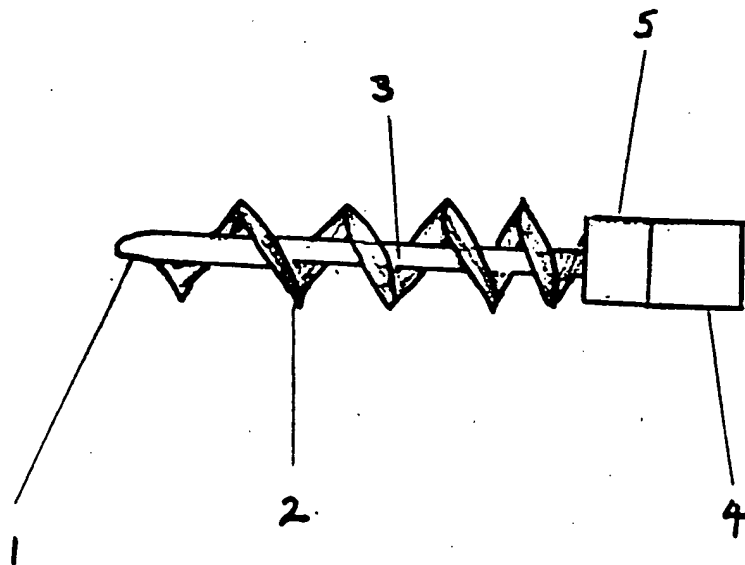
(57) A uterine screw-plug for temporary or permanent contraception can be screwed into the cornual portion of the fallopian tube using a hysteroscopic technique. The plug is 11mm long and 2mm in diameter. It has a shaped, eg square or hexagonal, end 4 by which it can be gripped for insertion or removal.



U  
C  
C  
U  
S  
E  
D  
I  
N  
T  
H  
E  
P  
A  
T  
E  
N  
T  
O  
F  
F  
I  
C  
E

DIAGRAM.

2211095



2211095

#### UTERINE SCREW-PLUG

for female sterilization both temporary and permanent

The screw-plug is a device that is inserted into the cornual opening of the human fallopian tube. When inserted it will prevent fertilization of the human ova by preventing spermatazoa gaining access to the ova. The device may remain as long as it is required. It may be removed in order to allow fertilization and conception to take place.

The device is a small screw (see diagram) which is introduced into the uterine cavity under direct vision using an operating hysteroscope. The uterine screw-plug is held by its head with biopsy forceps. The insertion end is introduced into the opening of the fallopian tube and the device is screwed into the proximal portion of the tube (cornua). Once in place it will remain until removed by a similar procedure in reverse.

An illustrative example of the invention is shown in the accompanying drawing. Referring to the illustrative example of a screw-plug,

5 The screw-plug shown in the diagram is 11mm in length, 2mm in diameter. The introducing end (1) is rounded to assist accurate placing in the lumen of the tube. The screw (2) is of the 'self-tapping' design with a central core (3) of 1mm and a length of 8mm. The  
10 holding portion is square (4) on a rounded shank (5) to enable a firm hold to be made. The rounded shank tends to act as a plug portion.

15 It is preferably manufactured in a radio-opaque material. The material should cause little or no tissue reaction. It may be made of metal or plastic or nylon.

20 The holding portion may be other than square, for example hexagonal or rounded, eg. like a 50p piece, to enable it to be gripped by biopsy forceps easily from various angles. The holding portion 4 may also be larger in diameter than the screw 2, again to enable easier gripping by forceps especially on removal.

25

- 3 -

The uterine screw-plug is a device for preventing conception by blocking the fallopian tubes. It is simply inserted and may be removed when necessary. It is a temporary or permanent contraceptive.

CLAIMS

1. A screw-plug adapted to block a fallopian tube.
- 5 2. A plug according to claim 1, wherein the plug has a screw thread for engaging and retaining the screw in the fallopian tube.
- 10 3. A plug according to claim 1 or 2, wherein the screw-plug has a head adapted to be held by biopsy forceps.
- 15 4. A plug according to claim 3, wherein the head is square or hexagonal.
5. A plug according to any preceding claim<sup>wherein</sup> the introduction end is blunt.
- 20 6. A plug according to claim 5, wherein the introduction end is rounded.
7. A plug substantially as hereinbefore described with reference to the accompanying drawings.

AMENDMENTS TO THE CLAIMS

8. A plug as claimed in any of claims 1 to 7, wherein the plug is inserted into a fallopian tube to block the tube.

5 9. A method of contraception in which the fallopian tube is blocked by a screw-plug.

10 10. A method as claimed in claim 8, wherein the screw-plug which is used is as claimed in any of claims 2 to 6.